

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously submitted) A gelatin-based substrate for fabricating protein arrays, the substrate comprising: a support having a coating thereon comprising gelatin and a trifunctional compound A-L-B affixed in said gelatin; wherein A is a functional group capable of interacting with the gelatin; L is a linking group capable of interacting with A and with B; and B is a functional group capable of interacting with a protein capture agent, wherein A may be the same or different from B.
2. (original) The gelatin-based substrate of claim 1 wherein the interaction between the gelatin and A is a physical binding or a chemical reaction.
3. (original) The gelatin-based substrate of claim 1 wherein the interaction between the protein capture agent and B is a physical binding or a chemical reaction.
4. (original) The gelatin-based substrate of claim 1 wherein either A or B, or both, is aldehyde, epoxy, hydrazide, vinyl sulfone, succinimidyl ester, carbodiimide, maleimide, dithio, iodoacetyl, isocyanate, isothiocyanate, or aziridine.
5. (original) The gelatin-based substrate of claim 1 wherein B is an affinity tag capable of interacting non-covalently with a protein capture agent that is to be immobilized onto the substrate.
6. (original) The gelatin-based substrate of claim 1 wherein B is streptavidin, biotin, glutathione-S-transferase, glutathione, or histidine tags.

7. (original) The gelatin-based substrate of claim 1 wherein L is a diradical of such a length that the shortest through-bond path between the ends that connect A to B is not greater than 10 atoms.

8. (original) The substrate of claim 1 wherein the gelatin is alkaline pretreated.

9. (original) The substrate of claim 1 wherein the gelatin is pig gelatin or fish gelatin.

10. (original) The substrate of claim 1 wherein the gelatin coverage is 0.2 to 100 grams per square meter.

11. (original) The substrate of claim 1 wherein the gelatin coverage is 10 to 50 grams.

12. (currently amended) A method of making a gelatin-based substrate for fabricating protein arrays comprising the steps of:

- providing a support;
- coating on the support a composition containing gelatin;
- affixing to a surface of the gelatin a trifunctional compound A-L-B₃, wherein A is a functional group capable of interacting with the gelatin, L is a linking group capable of interacting with A and with B₃, and B is a functional group capable of interacting with a protein capture agent;

wherein A may be the same or different from B, and wherein the trifunctional compound ALB is affixed while coating the gelatin on the substrate.

13. (canceled)

14. (canceled)

15. (original) The method of claim 12 wherein the protein capture agent is antibody, protein scaffold, peptide, nucleic acid ligand, or a molecular imprinting polymer.

16. (currently amended) A method of making a substrate having a protein capture agent affixed onto a surface comprising the steps of:

-- providing a substrate comprising gelatin;

-- affixing in to a surface of the gelatin a trifunctional compound A-L-B₂; wherein A and B are each independently selected from ~~is~~ a functional group capable of interacting with the gelatin and a protein capture agent, and; L is a linking group capable of interacting with A and with B; ~~and B is a functional group capable of interacting with a protein capture agent; and~~

--bringing said surface of the gelatin in contact with a protein.

17. (currently amended) A substrate comprising gelatin, a trifunctional compound A-L-B affixed in the gelatin, and a plurality of protein capture agents attached to the gelatin ~~by means of a~~ through the trifunctional compound A-L-B₂; wherein A and B are each independently selected from ~~is~~ a functional group capable of interacting with the gelatin and a protein capture agent, and; L is a linking group capable of interacting with A and with B; ~~and B is a functional group attached to the a protein capture agent.~~

18. (original) The substrate of claim 17 wherein the protein capture agent is an antibody, protein scaffold, peptide, nucleic acid ligand, or a molecular imprinting polymer.

19. (currently amended) A method of making a gelatin-based substrate for fabricating protein arrays comprising the steps of:

--providing a support;

--coating on the support a composition containing gelatin;

--affixing in to a surface of the gelatin a trifunctional compound A-L-B₂; wherein A and B are each independently selected from ~~is~~ a functional group capable of interacting with the gelatin and a protein capture agent, and; L is a

linking group capable of interacting with A and with B; ~~and B is a functional group capable of interacting with a protein capture agent;~~
wherein A may be the same or different from B, and wherein the trifunctional compound ALBA-L-B is affixed after coating the gelatin on the substrate.

20. (previously submitted) The method of claim 19 wherein the protein capture agent is antibody, protein scaffold, peptide, nucleic acid ligand, or a molecular imprinting polymer.